CLAIMS

1. Substantially pure DNA encoding a *Salmonella* secreted protein (Ssp).

2. The DNA of claim 1, wherein said DNA comprises the SspB gene.

3. The DNA of claim 2, wherein said DNA comprises the DNA sequence of SEQ ID NO: 1 or degenerate variants thereof encoding the amino acid sequence of SEQ ID NO: 5.

4. The DNA of claim 1, wherein said DNA comprises the SspC gene.

5. The DNA of claim 4, wherein said DNA comprises the DNA sequence of SEQ ID NO: 2 or degenerate variants thereof encoding the amino acid sequence of SEQ ID NO: 6.

6. The DNA of claim 1, wherein said DNA comprises the SspD gene.

7. The DNA of claim 6, wherein said DNA comprises the DNA sequence of SEQ ID NO: 3 or degenerate variants thereof encoding the amino acid sequence of SEQ ID NO: 7.

8. The DNA of claim 1, wherein said DNA comprises the SspA gene.

9. The DNA of claim 8, wherein said DNA comprises the DNA sequence of SEQ ID NO: 4, or degenerate variants thereof encoding the amino acid sequence of SEQ ID NO: 8.

10. The DNA of claim 1, wherein said DNA comprises the SspB gene, the SspC gene, the SspD gene and the SspA gene.

11. The DNA of claim 10, wherein said DNA comprises the DNA sequence of SEQ ID NO: 15.

12. The DNA of claim 1, wherein said DNA comprises the SspH gene.

13. The DNA of claim 12, wherein said DNA comprises the DNA sequence of SEQ ID NO: 13, or degenerate variants thereof encoding the amino acid sequence of SEQ ID NO: 14.

14. The DNA of claim 1, wherein said DNA comprises the stpA gene.

15. The DNA of claim 14, wherein said DNA comprises the DNA sequence of SEQ ID NO: 10 or degenerate variants thereof encoding the amino acid sequence of SEQ ID NO: 12.

16. A cell which contains the DNA of claim 1.

17. A method of inducing uptake of a bacterial cell by an epithelial cell in a mammal, comprising increasing expression of the DNA of claim 4 or 6 in said cell and administering said cell to said mammal.

18. The method of claim 17, wherein said bacterial cell is a *Salmonella* cell.

19. A method of inducing uptake of a bacterial cell by a macrophage in a mammal, comprising decreasing expression of the DNA of claim 4 or 6 and administering said cell to said mammal.

20. A substantially pure SspC polypeptide.

21. The polypeptide of claim 20, comprising an amino acid sequence substantially identical to the amino acid sequence of SEQ ID NO: 6.

22. An active fragment of the polypeptide of claim 21.

23. A substantially pure SspD polypeptide.

24. The polypeptide of claim 23, comprising an amino acid sequence substantially identical to the amino acid sequence of SEQ ID NO: 7.

25. An active fragment of the polypeptide of claim 24.

26. A substantially pure SspH polypeptide.

27. The polypeptide of claim 26, comprising an amino acid sequence substantially identical to the amino acid sequence of SEQ ID NO: 14.

28. An active fragment of the polypeptide of claim 27.

29. A substantially pure IagB polypeptide.

30. The polypeptide of claim 29, comprising an amino acid sequence substantially identical to the amino acid sequence of SEQ ID NO: 11.

31. An active fragment of the polypeptide of claim 40.

32. An antibody which binds to a Ssp.

33. A method of detecting a *Salmonella* infection in a mammal comprising contacting a biological sample derived from said mammal with the antibody of claim 32 and detecting the binding of said antibody to a Ssp in said sample, wherein said binding indicates that said mammal is infected with *Salmonella*.

34. A method of detecting the presence of *Salmonella* in a biological sample comprising contacting said sample with a Ssp-encoding DNA under high stringency conditions and detecting the hybridization of said DNA to nucleic acid in said sample, wherein hybridization indicates the presence of *Salmonella* in said biological sample.

35. A method of targeting an antigen to an epithelial cell in a mammal, comprising linking said antigen to an Ssp or active fragment thereof to produce a Ssp chimeric antigen and administering said chimeric antigen to said mammal.

36. The method of claim 35, wherein said Ssp is SspC or SspD.

37. A method of inducing a cytotoxic T cell immune response in a mammal, comprising linking said antigen to an Ssp or active fragment thereof to produce a Ssp chimeric antigen and contacting an antigen-presenting cell with said chimeric antigen.

38. A vaccine comprising a bacterial cell the virulence of which is attenuated by decreased secretion of a Ssp.

39. The vaccine of claim 38, wherein said bacterial cell is a *Salmonella typhimurium* cell.

40. The vaccine of claim 39, wherein said bacterial cell is a *Salmonella enteriditis* cell.

41. The vaccine of claim 38, wherein said bacterial cell is a *Salmonella typhi* cell.

42. A live *Salmonella* cell in which a gene encoding a heterologous antigen is inserted into a Ssp-encoding gene.

43. A method of vaccinating an animal against a *Salmonella* infection comprising administering the vaccine of claim 38.

44. A substantially pure StpA polypeptide.

45. A method of dephosphorylating a protein, comprising contacting said protein with the polypeptide of claim 44 or an active fragment thereof.